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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,487	02/23/2005	Martin Dieter Liess	NL 020808	4982

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
KARIMI, PEGEMAN	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,487	LIESS, MARTIN DIETER	
	Examiner	Art Unit	
	Pegeman Karimi	2609	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02/23/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/23/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1A and 1B should be designated by a legend such as --Conventional-- because only that which is old is illustrated (see page 3, paragraph 49, lines 29-31). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13-18 recite the limitations "A mobile phone", "A cordless phone", "A laptop computer", "A handheld computer", "A keyboard for a desk computer", and "A remote control for a TV set" in the preamble of each claim. There is inconsistent with the preamble of the independent claim. It is understood that the claims meant to point "The apparatus equipped with an integrated optical keyboards and optical input device implemented in a mobile phone".

4. Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 7 recites the limitation " said component " in the third line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1, 4-18 are rejected under 35 U.S.C. 102(a) as being anticipated by Liess (WO 02/37411)

As to claim 1, Liess et al. discloses an apparatus (120) comprising:

an optical input device (129) controlled by a moving object (Finger, 15) and an optical keyboard (121). The claimed "optical keyboard" is so broad that it can be read on the keyboard (112) having an optical input device (129), (Liess teaches). Input device (1, 3, 4, 10, 11, 12, 13, and 18; see Fig. 5a) comprises at least one optical sensor (4) unit comprising:

a diode laser (3) for supplying a measuring beam (13, Page 12, lines 4-5) and

converting means (photo diode, 4) for converting measuring beam radiation reflected by the object into an electric signal (Page 12, lines 14-16), which converting means (fig. 6, 4) are constituted by the combination of a laser cavity (20) and

measuring means (4) for measuring changes in operation of the laser cavity (Page 12, lines 12-16), which are due to interference of reflected measuring beam (26) radiation re-entering the laser cavity and the optical wave in this cavity and which are representative of the movement of the object (page 12, lines 25-34, page 13, lines 1-5), characterized in that the path of the measuring beam from the diode laser to the window (12) extends through a light guide of the optical keyboard (Dome 10 guides the beam 13 to the window 12).

As to claim 4, Liess et al. (Fig. 12) teaches that the input device (129) comprises a sensor unit (4) adapted to measure both a scroll movement and a click movement (Page 23, lines 13-17) and provided with additional means (7, 8, etc), which allow establishing the presence of an object on the window of the device (Fig. 12, the 3rd diode laser and photo sensor senses the presence of object 15 and outputs a click).

As to claim 5, Liess teaches the additional means (4, 22, 21, etc.) are constituted by means for establishing whether the modulated measuring beam radiation (4) shows an amplitude variation of a frequency (Laser radiation) lower than the frequencies of variations caused by a scroll movement (re-entering radiation), (Page 15, lines 33-34 and Page 16, line 1).

As to claim 6, Liess teaches a sensor unit (Fig. 5a) comprises a first radiation-sensitive detector (monitor diode, 6) for measuring variations in the laser cavity (Page 14, lines 10-14), characterized in that the additional means (10, 12, 18, etc.) is constituted by a second radiation-sensitive detector (4) arranged for receiving measuring beam radiation (Page 12, lines 12-16), which is non-incident on the laser cavity (Fig. 6, Photo diode 4 is located outside of the laser cavity).

As to claim 7, Liess teaches the additional means (18, 19) are constituted by electronic means (8, 7) for detecting said component in the output signal of said measuring means (Z-direction, Page 17, lines 23-27).

As to claim 8, Liess teaches a sensor unit (motion detector) is activated by activation pulses (Page 16, lines 29-32) and;

the measuring means (photo diodes) perform measurements during time intervals determined by the activation pulses (first and second half periods, page 16, lines 26-28), characterized in that

the additional means comprises counting means and comparing means (Electronic processing circuit) to establish whether the number of undulations in the output signal (forward or backward direction) measured during a first and second half of a said time interval are equal (Page 15, lines 23-24).

As to claim 9, Liess et al. discloses the measuring means (4 and 6) of the input device are means for measuring a variation of the impedance of the laser cavity (Page 12, lines 12-16)

As to claim 10, Liess teaches the measuring means is a radiation-sensitive detector (4 and 6) for measuring radiation emitted by the laser (3), (Page 12, lines 12-14).

As to claim 11, Liess (Fig. 6) teaches the radiation-sensitive detector (4) is arranged at the rear side of the laser cavity (Page 12, lines 21-23).

As to claim 12, Liess teaches the second detector (6) is arranged at the side of the laser cavity (measuring beam and second detector are located side by side on the base) where the measuring beam is emitted (5).

As to claim 13, Liess et al. discloses a mobile phone (80) apparatus equipped with an integrated optical keyboard (83, device 89 is integrated in the keyboard) and optical input device (89), (Page 8, lines 30-32).

As to claim 14, Liess et al. discloses a cordless phone apparatus (80) equipped with an integrated optical keyboard (83, device 89 is integrated in the keyboard, which makes the keyboard an optical keyboard) and optical input device (89), (Page 8, lines 30-32).

As to claim 15 and 16, Liess et al. discloses a laptop computer (110) equipped with an integrated optical keyboard (119 is integrated in the keyboard 113, which makes the keyboard an optical keyboard) and optical input device (119), (Page 8, lines 30-32).

As to claim 17, Liess et al. discloses a keyboard for a desk computer (120) equipped with an integrated optical keyboard (129 is integrated in the keyboard 121,

which makes the keyboard an optical keyboard) and optical input device (129), (Page 8, lines 30-32).

As to claim 18, Liess et al. discloses a remote control (107) for a TV set (100) equipped with an integrated optical input device (109), (Page 8, lines 30-32).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liess (WO 02/37411 A1) in view of Printzis (U.S. Patent 6,525,677).

As to claim 2, Liess et al. does not teach measuring beam of the first and second sensor. Printzis (Fig. 1) teaches the apparatus characterized in that the input device comprises two sensor units (134 and 132), which are arranged relative to the optical keyboard (col. 5, lines 46-47 and lines 57-59) such that the measuring beam of the first and second sensor unit (photo diode, 132 and 134) passes on its way to the device window (i.e. 320, 322, 324, 318, etc.) the positions of a first set of keys and the positions of a second set of keys (col. 3, lines 40-42, and col. 4, lines 26-30), respectively, the first set and the second set (rows and columns) together comprising all

keys to be controlled (see Fig. 1). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the two sensor units of Printzis to the input device of Liess because the two sensors of Printzis configured to respond to a change in a received light quantity and to provide an electrical signal in response to a selection of a key at a key location (col. 14, lines 29-32).

As to claim 3, Printzis teaches the input device comprises three sensor units (410, 412, 416), which are arranged relative to the optical keyboard such that the measuring beam of the first (410), the second (412) and the third sensor (416) unit passes on its way to the device window (col. 12, lines 43-48) the positions of a first, a second and a third set of keys (row, column and diagonal), respectively, the first, second and third set comprising all keys to be controlled (See Fig. 5).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liess et al. Pub. No. (2002/ 0104957) states a method of measuring the movement of an input device)

Kinrot et. al. U.S. Patent (6,424,407) discloses an optical translation measurement comprising optical devices and optical detectors to detect movement of objects on the wondow.

Van Brocklin et al. U.S. Patent (6,552,713) discloses an optical pointing device that controls curser movement on a screen in an electrical device.

Inquries

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
04/09/2007

CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER